

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
20 January 2005 (20.01.2005)

PCT

(10) International Publication Number
WO 2005/005492 A1

(51) International Patent Classification⁷: **C08F 10/00**

(21) International Application Number:
PCT/EP2004/051261

(22) International Filing Date: 28 June 2004 (28.06.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
03102021.7 4 July 2003 (04.07.2003) EP

(71) Applicant (for all designated States except US): **ATO-FINA RESEARCH** [BE/BE]; Zone Industrielle C, B-7181 Seneffe (Feluy) (BE).

(72) Inventor; and

(75) Inventor/Applicant (for US only): **RAZAVI, Abbas** [IR/BE]; 35, Domaine de la Brisée, B-7000 Mons (BE).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM,

AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: **RANDOM OLEFIN COPOLYMERS**

(57) Abstract: Provided is a method for the production of an olefin co-polymer, which method comprises co-polymerising two or more olefin monomers in the presence of a metallocene catalyst, wherein the metallocene catalyst comprises a metallocene having the following formula: $R''(CpR_m)(FluR'_n)MQ_2$ wherein Cp comprises a cyclopentadienyl ring; Flu comprises a fluorenyl ring; R'' comprises a structural bridge imparting stereorrigidity to the component; each R is the same or different and is an organic group; m is an integer of from 1-4; each R' is the same or different and is an organic group; n is an integer of from 0-8; M is a metal atom from group IVB of the Periodic Table or is vanadium; and each Q is a hydrocarbon having from 1-20 carbon atoms or is a halogen.

WO 2005/005492 A1